

sedgeland. In the Eastern States and Tasmania, the bird has also been recorded in both temperate and sub-tropical graminoid heathlands (Meredith, 1983, RAOU Newsletter 55 : 6-11).

Our sighting was in low heathland on well-drained upland near the Stirling Fault. The area has an annual average rainfall of 400 mm and is located 30 km from the sea. The vegetation was 50-60 cm high with a shrub canopy cover of 35-40% consisting largely of *Hakea falcata* with some *Allocasuarina campestris* ssp. *campestris*. Underlying sedges were 10-15 cm high with a canopy cover of 10-15% and dominated by *Mesomelaena stygia*.

—KEN and BRENDA NEWBEY (Ongerup) and
KEITH BRADBY (Ravensthorpe)

Quokka, *Setonix brachyurus*, at Green Range — The pre-settlement range of the Quokka extend east to Esperance. It has diminished on the mainland since clearing and reports are now a rare occurrence.

In January 1983 while at Green Range (60 km north-east of Albany) I was informed of the presence of Quokkas there. Farmers were aware of their presence and had recently sighted animals fleeing from burning bushland. One farmer keeps a pet Quokka. Although I did not see any live animals, I located a skeleton which was identified by the Museum.

According to Kitchener & Vicker 1981 (*Catalogue of Modern Mammals in the Western Australian Museum 1895 to 1981*) the Museum has received specimens in the last 20 years from Two Peoples Bay and Ellen Peak which are respectively 40 km southwest and 30 km north of Green Range.

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A record of late breeding by Blue-billed Duck *Oxyura australis*. — On 5 March 1982, at about 1830 hours, a female Blue-billed Duck with 6 downy ducklings (approx. one week old) were observed at the Bayswater Bird Sanctuary (31°55'S, 115°55'E), near the Swan River. The Sanctuary is a small permanent swamp (approx. 4 ha.), situated 7 kilometres NNE of Perth, which is artificially maintained over summer, and floods to a maximum depth of about 1.5 metres in winter.

As the presence of downy ducklings in early March can be considered highly unusual, it might be considered desirable to reconstruct the preceding events. Judging by their size and appearance, the first ducklings would almost certainly have hatched between 27 February and 1 March. The period of incubation for this species is between 26 and 28 days (Wheeler, *Emu*, 60, 281-4, 1960), so final egg-laying must have taken place between 1 and 4 February. If the female laid an egg each morning until the clutch was complete, at least 6 days must have elapsed between the laying of the first and last egg. Egg-laying would have therefore commenced between about 27 and 30 January. In Blue-billed Duck clutches are normally from 5 to 8 in number (Serventy and Whittell, *Birds of Western Australia*, 1976), thus in the case of these 6 ducklings the possibility of early mortality or infertility of some eggs may be ignored. Occasionally, Blue-billed Duck occupy the deserted nest of a Coot (*Fulica atra*) or other waterbird (Frith, *Waterfowl in Australia*, 1967). Assuming a ready made nest was available, and allowing one day for courtship activities, then 26 January is the earliest date before which stimulation to breeding may have occurred.

In a regular winter rainfall area, such as the Perth region, clutches are usually complete by November (Frith, 1967). Records from areas with erratic or uniform rainfall, such as inland and south-east Australia, indicate that eggs have been found between September and February (Frith, *ibid* 1967; Wheeler, *Emu*, 53, 280-2, 1953). However, following heavy rainfall in February 1955, Serventy and Marshall (*Emu*, 57, 99-126, 1957) recorded in the Perth area a female Blue-billed Duck with two small ducklings on 8 May. Similarly, between 20 and 22 January 1982, Perth received 115 mm, its highest January rainfall on record. Following these rains, Mr E. Singleton observed that all species of waterfowl left the Bayswater swamp, the only exception being Blue-billed Duck, which were present in larger numbers than usual for the time of year.

Although Blue-billed Duck have a regular spring breeding season in the Perth region, this observation raises the interesting possibility that they may respond to extraordinary climatic events and breed at an unusual time.

When I visited the Bayswater Bird Sanctuary I was accompanied by Mr E. Singleton, who is a regular bird-watcher in the area.

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Diamond doves and other northern birds in the South-West of W.A. in 1981.

The Diamond Dove (*Geopelia cuneata*) has been recorded in the South-West on a number of occasions in the past. Serventy and Whittell gave its normal southern limit as the Murchison country but sometimes visiting the South-West. They also mention several other recordings including 1912 when a pair nested near Moora, but it is not stated whether or not the nesting was successful. Masters and Milhinch (*Emu*, 74: 228-244, 1974) record dates when single birds were seen in the Shire of Northam. During 1981 Diamond Doves were again reported from widespread points in the Shire. Two pairs nested near the homestead on my farm 8 km south-east of the town of Northam, and the results of the nestings are shown in Table 1.

<u>Pelr</u>	<u>Nesting Tree</u>	<u>Date Nest found</u>	<u>Size of Clutch</u>	<u>Results</u>
A,B	Tamarix gallica	30.10.1981	2	Hatched 11.11.81 1 chick died 20.11.81 2nd chick died 21.11.81
C,D,	York Gum Eucalyptus loxophleba	9.11.1981	2	C killed by domestic cat 12.11.81 D abandoned nest 14.11.81 and left the area.
A,B, 2nd nesting	Marri Eucalyptus calophylla	December 1981	2	A Killed by Goshawk 16.12.81 Chicks about 9 days old had died the same day. B remained until 8.1.82

Table 1. Diamond Doves nesting at Seabrook, 8km south-east of Northam. First arrived 14 October 1981.

The cause of the deaths of the chicks is not known. Each of their crops was well filled with very small grass seeds and the nests were undisturbed.

A few Cockatiels (*Nymphicus hollandicus*) also have been noted in the Shire of Northam and in the south-west portion of the state, some appearing as far south as Lake Grace.

Budgerygars (*Melopsittacus undulatus*) were seen in the Northam district and south of Tammin.

The Masked Woodswallow (*Artamus personatus*) which is reported more often in the South-West, appeared to be in larger numbers in 1981 (Serventy, W. Aust. Nat. 12, 143: 1973). G. Chapman observed flocks at Gooseberry Hill and Pickering Brook in October, while at Northam J.R. Masters saw a flock at "Glen Avon", and C. Richter reported a flock of 20-30 birds, and found a nest south of Grass Valley containing almost fully fledged young in the first week of December. This is the first time I have heard of them nesting within the Shire of Northam. R. Garstoe reported a flock of over 20 at Collanilling north-east of Wagin, and a large flock of about 300 flying over mallee at Ongerup, also several birds east of Lake King.

Another unusual sighting was a pair of Orange Chats (*Ephthianura aurifrons*) at Lake Hinds, and another pair was seen at Yandegin south-east of Bonnie Rock.

Early in the winter, Bustards (*Ardeotis australis*) were reported in greater than usual numbers in the Dandaragan coastal area.

Some of the regular springtime migrants to the South-West such as the Rufous Songlark (*Cinclorhamphus mathewsi*) and White-winged Triller (*Lalage sueurii*) were seen in unusually large numbers in the Northam area and breeding very actively with numerous nests being found.

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